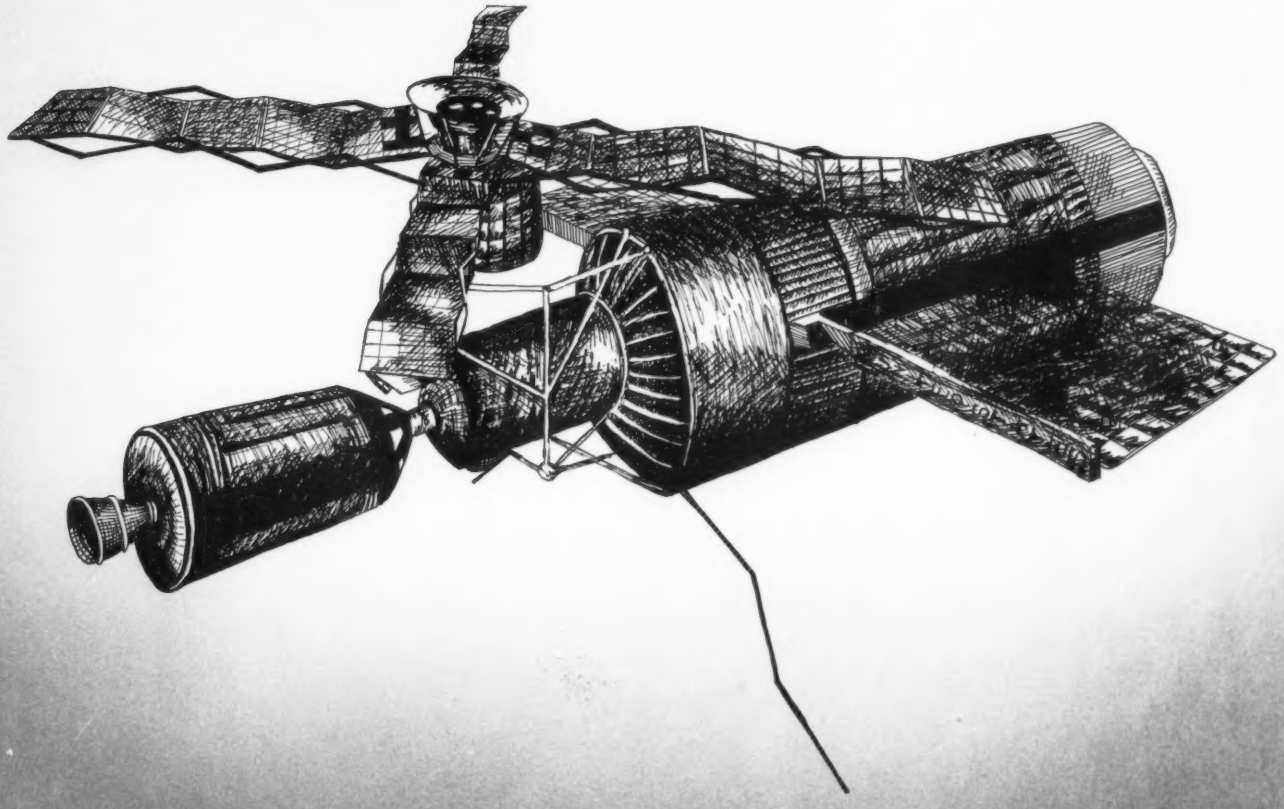
SEALIFT



MARCH 1973

Don't Look Back

Don't Look Back

It's questionable whether Satchel Paige is more widely known for his pitching exploits, or for his down-to-earth philosophies. One of his more widely quoted bits of advice is, "Don't look back, something may be gaining on you."

It's true that we cannot rely on our past record anymore than we can relive past exploits. But, looking back, does sometimes provide a better perspective than an account of where we stand today.

The Vietnam War now is behind us. Its history is bound to be closely studied for many generations—and we may learn many lessons from that history. One may be a greater awareness of the role of strategic sealift in such an emergency.

Between Fiscal Years 1965 and 1972, MSC delivered more than 85.7 million measurement tons of military supplies and equipment in Vietnam and Thailand. Another 16 million long tons of petroleum products were provided our fighting forces.

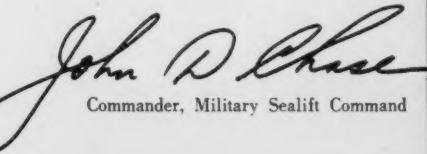
During the last two years, more than 95 per cent of the volume which moved there from the Continental United States was carried in commercial ships. In the peak year, 1969, when 15.8 million tons were delivered, commercial ships moved almost three fourths of the military cargo sent from the United States to Vietnam and Thailand.

During the entire 1965–72 period, the lowest share of cargo moved by commercial U.S. flag vessels was the 60 per cent recorded in 1967. And that was because more than 160 Government owned ships withdrawn from the National Defense Reserve Fleet were in full operation, delivering ammunition our forces needed.

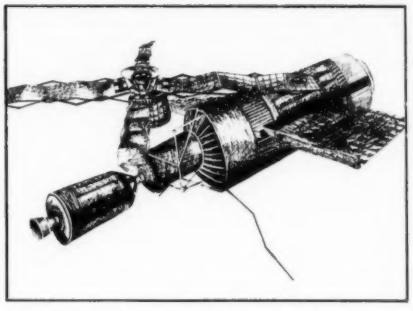
In 1965, sealift deliveries of vital supplies and equipment totaled only 1.5 million tons. In 1966, requirements surged to almost 8 million tons. In both 1967 and 1968, MSC delivered more than 15 million tons. In 1972, however, MSC volume had dropped to about half of the peak years, 7.5 million tons.

What do these numbers mean? By themselves, merely a mathematical picture. When one considers the number of ships and the human effort involved, they represent a tremendous contribution to our national security by the men who sailed both commercial ships and those MSC operates. It is a record to be proud of.

There is, however, great validity in Satchel Paige's warning. Time and technological progress have reaped their toll from the force of ships which were used in Vietnam. Many are no longer available. The seagoing work force has declined substantially. New ships which have been built are not of the most suitable type for a future emergency operation such as Vietnam. If we are going to be able to cope with such an emergency, we need to look ahead, to learn how to use the ships we will have. If we do not, someone will indeed be gaining on us.



Commander, Military Sealift Command



COVER: Artist's rendering of NASA's Skylab by Linda Maselas.

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Features:

Vanguard in Argentina

Page 4

Inspection trip

Page 6

AIMS satellite

Page 12

Last of the troopships

Page 19

Other Features:

A woman scientist aboard MSC vessels—page 16; Helicopters up the Rhine—page 22.

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As U.S. astronauts orbit the earth in Skylab, they may receive

¡Saludos de Argentina!

When a huge Saturn rocket lifts the National Aeronautics and Space Administration's Skylab into earth orbit in mid May, millions of people will be watching, including the space technicians and crew aboard Military Sealift Command's USNS Vanguard. The latter group, however, will be directly involved with success of the mission depending to a great extent upon the vital tasks they perform.

Now steaming toward Argentina, Vanguard will be a vital link in the tracking and data communications network for the spacecraft. An interconnected worldwide complex of tracking stations stretching from Alaska to Australia will provide communications between the Earth and the astronauts piloting the Skylab in its 233.5 mile earth orbit. The system includes 22 permanent and several temporary ground stations, specially equipped aircraft, and the USNS Vanguard, capable of performing the same functions as land-based stations.

Skylab is an orbiting space station that will house three teams of astronauts who will conduct a series of 60 experiments over an eight-month period. Different from the Apollo space program, Skylab is the first program to exploit space rather than explore it. Astronauts will investigate man's ability to work and survive in space, the nature of the planet he lives on and the impact of the sun on earth.

After an early-morning launch May 14, Skylab will orbit the earth every 93 minutes, collecting data and relaying it to earth via tracking stations located around the world, including the Vanguard. The first three-man crew to work in Skylab, an all-Navy team, will join the facility in space May 15, 24 hours after it is launched. They will remain in Skylab for 28 days before returning to Earth. Three crews in all will inhabit Skylab during the eight-month test. They will live in virtual luxury, as compared with Apollo flights, having more than 30 times as much space as the Apollo astronauts. Though the experiments themselves will only last eight months, Skylab will remain in orbit for as long as nine years.

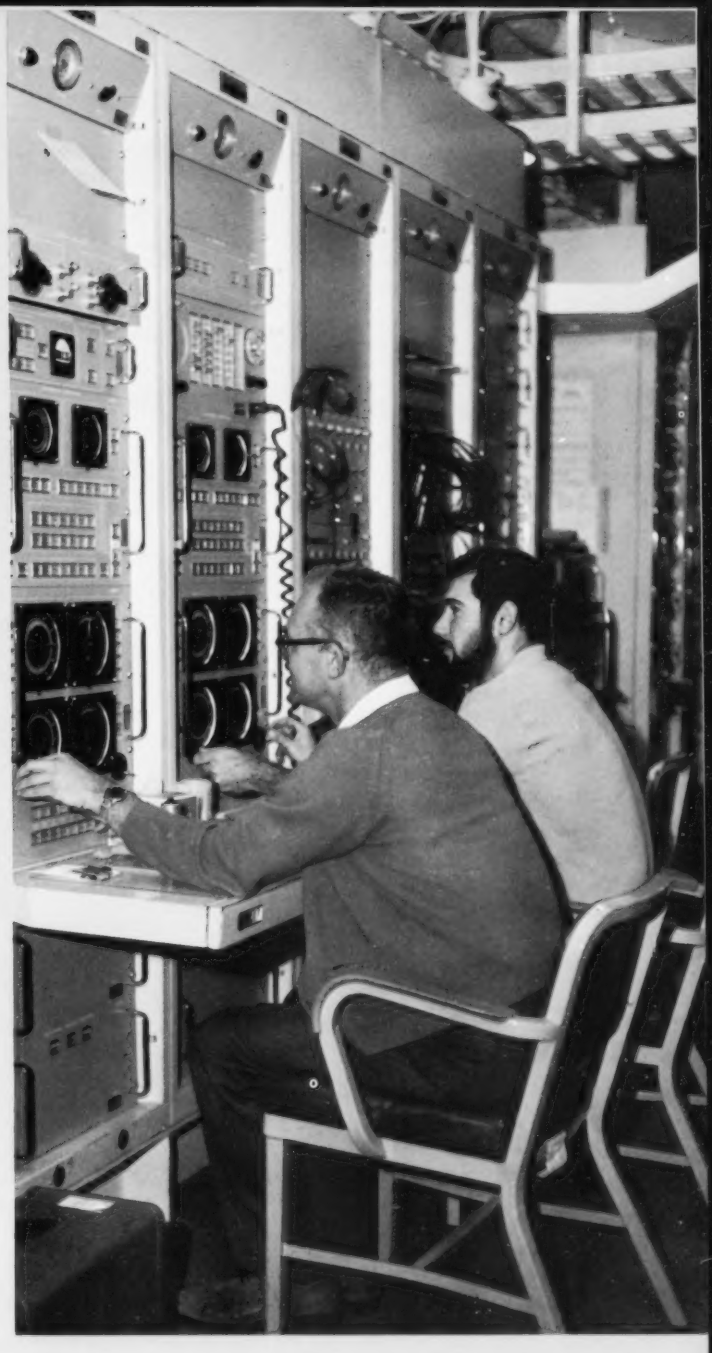
Vanguard is equipped with communication equipment and computer systems designed to relay data and information from Earth to the orbiting spacecraft, and to collect data from the space module. She will be stationed in port at Mar Del Plata, Argentina for eight to ten months. During previous Apollo flights, the Vanguard generally was stationed off Bermuda. However, path of the Skylab through space demanded that the ship be located in South America to fill in segments of the flight track that could not be covered by land or air stations.

Arrangements were made by MSC and NASA after initial liaison with the Argentine government by Ambassador to Argentina John Lodge and his staff, including Capt. Emiddio Massa, Navy attache. The ambassador and his staff worked with the Argentine Space Commission to secure Vanguard's berth. Members of the commission will play an active role during Vanguard's operations.

While locating the Vanguard in an Argentine port may seem a rather simple operation, it required a lot of effort, and a great deal of planning. Problems which had to be solved in advance included ship security and transportation for her crew of 88 merchant marines and 99 scientists. Purchase of fuel, food, and clothing had to be arranged in advance. Passports were required for everyone, all had to be made familiar with living conditions and customs in the Argentine city, and there were numer-

ous questions to be answered which concerned schools, churches, recreation areas, and institutions or businesses which serve human needs.

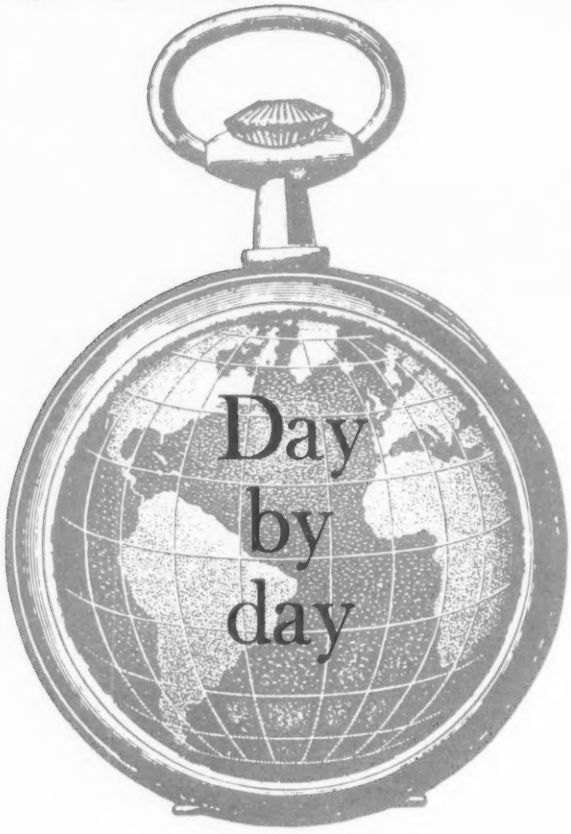
And there are the problems which stem from the need to insure that all of Vanguard's many systems and her equipment are maintained in A–OK working order. Standards which govern all operations of the Vanguard, like those of Skylab, can be summed up in one word—Perfection. That's what's needed, and that is what Vanguard is expected to provide.



TRACKING: Vanguard has all the equipment used by land-based stations in tracking operations.

VANGUARD: MSC's spacecraft tracking ship will be monitoring Skylab's orbits over the Southern Hemisphere.

An admiral's aide provides a behind-the-scenes report of an inspection trip



by
LT(jg) Donald J. Curran Jr.

An inspection trip—such as the recent one to the Far East made by the MSC commander and key staff members—is many things. Those being visited exert extra effort to make certain that everything is shipshape, and those who do the detailed work don't always beam with joy when they hear a VIP is coming. Others feel that a trans-Pacific trip is a jet joy ride—and those who make it unanimously agree it's sheer hard work, hours of boredom interspersed with a few light moments.

Trip reports from the last inspection trip to MSC, Far East by Rear Admiral John D. Chase are in, recommendations made have been acted upon, and those who made the trip have long since adjusted their time clocks. The Far East visit is a matter of record. But, it might be interesting to recount some of the events—and the problems—which never appear in a trip report. So, as the Jackie Gleason gal used to say, when introducing that weighty subject, "Aaaaaaaaway we go."

We departed Baltimore's Friendship airport on a cold, rainy February day, headed for San Francisco and warmer climes. Later it seemed as though we were a traveling vaudeville group doing a series of one-nighters. Baggage handling, gulped-down meals and lost sleep were to become routine before the end of the trip.

It was still raining when we arrived in the city by the bay. While in San Francisco we took in Giardeli Square during a torrential downpour whose intensity was exceeded only by its longevity.

Later that day we shuffled onboard a Boeing 747 jet and headed for Tokyo. Racing the sun across the Pacific, we lost it just as the coast of Japan came into view. Departing San Francisco on Saturday afternoon and landing ten hours later in Japan on Sunday afternoon does strange things to your body clock. Day becomes night and vice-versa. It's a battle to retain a sense of time.

Arriving at Haneda airport in Tokyo, I had my first experience with immigration and customs. A sign said, "Japanese and Aliens." That's evidently just to let you know where you stand. Except for the fact that the custom lines resembled the soup queues of the depression years it was a fairly painless process. The customs agent had but one question. "Do you have any guns or swords?" Since we had left both at home, we were allowed to proceed. Outside the gates we were met by Capt. Darrell Ruebsamen, MSC, Far East commander, who was to accompany us for most of the trip.

DELONG PIER: A mobile pier in Vyama, Thailand used to load and discharge cargo when shore facilities are not available.

Next day we were treated to a helo lift to Camp Zama for several official calls. And we discovered that if you go above 750 feet on a work day, the Tokyo-Yokohama landscape disappears. You fly through a gray sea of smoke and glog. I thought that might be why many Tokyo pedestrians wore surgical masks. Not so. It's a traditional courstesy—now dying out—designed to prevent the spread of germs.

The return trip was made below the smog zone and we were amazed to see jogging tracks on many of the building roofs. Rooftop jogging provides exercise not obtainable on crowded city streets. There were also a number of rooftop swimming pools.

Next stop, Sasebo. There we were met by Lt. Cmdr. Jerry Bailey, who heads that MSC office. With the helo pad at the base of a cliff, we had a few anxious moments—anticipating an unscheduled cliffside landing. Safely on the ground, we toured Sasebo, which has grown in the past decade from a sleepy city to a boom town. Drydocks and shipyards flank a busy harbor in which several LSTs of World War II vintage rest at anchor, awaiting the shipbreaker's torch.

Our next stop was Taipei where we were greeted by Cmdr. Roy Stoddard, head of the Taipei office of MSC, Mrs. Stoddard treated us to a homecooked meal, a welcome treat for already weary travelers. I was surprised to find that the Chinese like spicy food—but I enjoyed the culinary delights put in front of us. Accompanying the food was a liquid dynamite, Shao-Shing wine. Three Shao-Shing toasts remarkably lower the inhibition level—and put a sharp edge on the rapier like witticisms of the diner-drinkers. We had a most enjoyable stay in Taipei.

During my visit I went to the central market with a Chinese Army captain I had met at the luncheon. He showed me some startling sights, among them the booths which specialized in aphrodisiacs. Two of the more popular items were snake meat, spiced with fresh snake bile, and dried lizards wearing bright red ribbons around their necks. The captain wouldn't vouch for their efficacy—and the Chinese apparently have no truth-in-labeling laws. In Okinawa, we were met by Lt. Cmdr. Joe Dothord, who commands the MSC Office, Okinawa. Again we enjoyed a helo tour of the Island, its ports and port facilities.

HOME SWEET HOME: A country dwelling on Taiwan.

ON TALUGA: Rear Admiral Chase (R), and Capt. Henry Phelps, (L), who heads MSC's fleet support program, confer with Taluga Master Larry Nasset.

LASH DELIVERY: Barges unloaded at Yokohama from the Thomas E. Cuffe, a Pacific Far East Lines ship, are taken in tow by tugs for delivery.

Our next stop, Korea, has changed dramatically. Manufacturing and industrial technology are growing rapidly with some analysts placing Korea in a position comparable to that of Japan 40 years ago.

Lt. Cmdr. Virgil C. Kagy's executive officer at Pusan, LTJG Don Burke, covered the highlights of the area, primarily the city's growth. As a fellow bachelor, he also briefed me on the American schoolteachers—purely as a matter of academic interest. There is, after all, nothing more beautiful than a tree. Most of the hillsides were without trees of any sort, a result of World War II. Programs are under way to replace the greenery, but the scars of war have not yet been erased.

While in Pusan the MSC travelers dined aboard USNS Upshur, since retired from MSC service. On a tour of the troopships engineering spaces the chief handed out white napkins to the inspection party. But, the whole area was clean as a whistle and the napkins remained in virgin condition.

Next stop was Seoul. Rear Admiral Henry Morgan hosted our party, and made that stop a pleasure. His aide, Lt. Gene Smith, knew where the best buys were. Seoul is another rapidly expanding Korean city. It is linked to Pusan (or Buson) by a four lane super highway completed about two years ago, one reason for the big push of development in the North. Factories, apartments, civic centers and other buildings are extending the city westward toward Inchon.

Inchon is carrying out an almost unbelievable project—enclosing its harbor. Tides there run about 30 feet, presenting problems for ships calling in Inchon. The Koreans are converting the harbor into a lake by installing locks at the harbor mouth. The project should be completed by the end of 1975.

While we were in Korea we "enjoyed" chilling weather (8° upon our arrival in Seoul), a taste treat which could have been made from spiced cabbage and old shoes, called Kim-shi, and a look at the black market which still flourishes. I was more impressed by the Korean Marine escorts. Reputed to be among the toughest fighting men in the world, they rank with the world's most fearless escort drivers. Five or six marines, armed to the teeth, hopped into a jeep to lead the way for our vehicles. Man, child and chicken scattered when they breezed through town like a motorized hurricane.

Leaving Korea, we again headed for Tokyo, a city which resembles Chicago or New York in many ways. Buildings are relatively low, but more spread out, and the people are always in a hurry.

Tokyo prices were literally out of this world. In Ginza, the Times Square of Tokyo, you could buy a bottle of Scotch for the modest sum of $60 before devaluation. It is possible, or so I heard, to drop $200 to $300 in an hour in some of the better nightclubs. At the hotel breakfast of melon and coffee cost $3. High prices are a result of protective tariffs on foreign goods designed to make local products more attractive.

The Japanese also are eliminating English signs which once were prolific. Get caught in the subway system and you may never be seen again, a claim which reminded me of Boston.

There are more tranquil spots in Japan, among them Kamakura, a small town between Yokohama and Yokuska where the once great Samurai did battle. It does wonders for the soul. Several famous shrines and temples attract people from all over Japan who enjoy the peace and comfort of the city.

After another enjoyable weekend, we departed for Bangkok via Naha, Okinawa, Cubi Point, and DaNang. Mileage on this trp would equal a flight from New York City to Honolulu, and then some. In Bangkok we were somewhat taken aback by the heat. It was 95 degrees at the airport and stayed that way, except for a few hours at night when the mercury would plummet to the mid 80s.

Lt. Cmdr. Peter Finch, MSC Office, Sattahip, escorted us for the entire Thailand visit, and had done an excellent job of paving the way, as did all office commanders during the trip.

The MSC Office at Sattahip is housed in a tower commanding a splendid view of the harbor. While we were there the Brostrom, Pine Tree State and Tampico all were in port, testifying to size of port operations at Sattahip. As usual, our official schedule was equally busy. We did have a chance to relax, however, the evening of our second day in town. The inspection party on the advice of Far East Counsel Ed Ferretti dined at a well known local restaurant—which was everything he claimed. Only rub came when it was discovered that someone had liberated all the soup spoons. Replacements were procured from a nearby Chinese restaurant, and the dinner was a success.

In each country visited, we tried to pick up a few phrases in the local language. In Thailand the words Mai Rehn Pei Kop Kuhn (pronounced My Ren Pie Cop Coon) came in handy. It means "no, thank you" and gives you an edge when refusing hawkers of local goods or service. When a cab driver promises you the world while hanging onto your pants leg, just let that phrase fly and he melts. While he recovers from the shock of hearing understandable Thai escape your lips, you make good your escape.

We arrived in the Philippines on a Thursday evening. After a late dinner, we made ready for the official calls the next day. Our host there was Lt. Cmdr. Nate Holway, who is due to retire in June. Nate had things well in hand and made our stay a memorable one.

Highlight of the Subic stop was our visit to USNS Taluga, the MSC manned fleet oiler supporting the Seventh Fleet. Capt. Larry Nasset guided the group around Taluga after a meal aboard ship. He was very proud of his crew, a feeling justified by the ship's record.

Manila would seem an unlikely place for a square dance, but we were greeted at the hotel by a group from Clark AFB there for the weekend in full Western dress. Home is where the heart is. Next day we toured Manila

SATTAHIP CONTAINER YARD: Containers await disposition at the Thailand port. Expansion program is now under way to handle increasing traffic.

MAGI SHRINE: Located in Tokyo, one of the most famous religious shrines in Japan attracts many visitors.

Bay aboard a 65 foot patrol boat, courtesy of the Philippine Navy. Even on a cloudy day, you can get sunburned, as I learned the hard way. One more souvenir.

After Rear Admiral John D. Chase addressed the local chapter of the Propeller Club, we were off again, headed for Guam. The Manila airport was destroyed by fire about a year and a half ago. We checked in for our flight in a restaurant, since there was no terminal. As is the custom, at least 50 people were on hand to greet or say goodbye to each passenger.

Once out of the crowd and aboard our plane, it was smooth sailing to Guam. Lt. Cmdr. Ted McDaniel, MSC Office, Guam and his XO, Lt. Carl Smith, had paved the way for our stay—including a car for me. That's a rare experience for an admiral's aide. Unfortunately, the car didn't work. Perhaps, it was the *solenoid*, perhaps not. We replaced the battery, a stop-gap measure which lasted three hours. But, it's the thought that counts.

The greatly expanded Guam port has one of the few container cranes in that part of the Pacific with port expansion under way. Believe it or not, the world's largest MacDonalds fast food facility is on Guam.

Once ready to leave, Carl and I threw the bags in the car and headed for the airport. Then the car began to overheat. As the gauge rose, we crunched down, awaiting the explosion. But, we made the airport, still not dis-

assembled, and the driver reached for the ignition to kill the engine. Too late. The car died of natural causes after severe internal hemorrhaging.

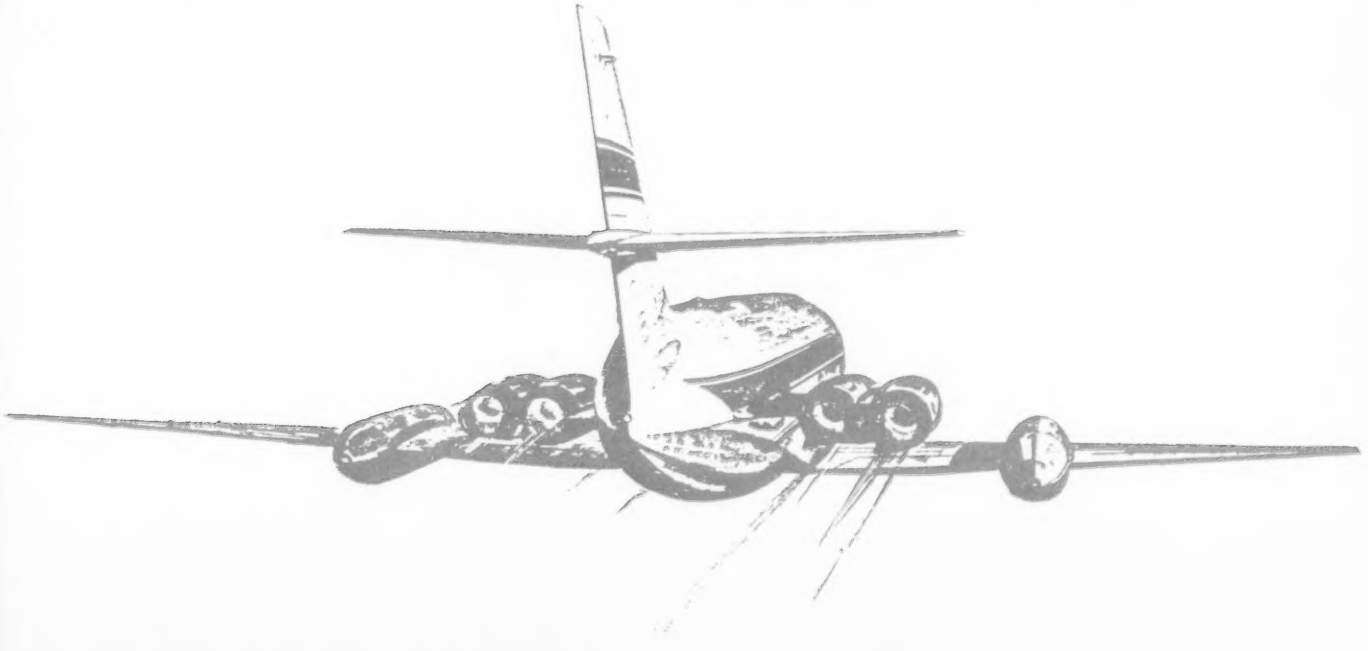
Goodbye Guam, Honolulu, here we come. The flight from Guam to Hawaii leaves your body wondering what's happening. Departing Guam at 1930 we arrived in Hawaii five hours later at 0630. The night had passed us by, but our body clocks insisted it was time to sleep. No such luck. We began our official day shortly after arrival.

Capt. Bill Cummins, commander of the MSC, Honolulu office, had arranged a traditional arrival. We were greeted by a pretty Hawaiian girl who asked if Admiral Kahn was nearby. I offered Admiral Chase, but she smiled and continued looking for Admiral Kahn. After we had gone through immigration and customs, she caught up with us and said she had misread the message. Admiral Chase was the elusive Admiral Kahn. But, again, it's the thought that counts.

After a busy day of official calls and a Propeller Club address that evening by Admiral Chase, the admiral and I went into Waikiki to see how it had changed. Incredible. Hotels have gone up as fast and high as the prices. Those changes, and the rain drenched sands of Waikiki soon made a good night's sleep more attractive.

Next day we said "aloha" to the islands and hello to the Golden Gate. By now, our physiological time pieces were better adjusted—and we were anxious to get home and slip into a more normal routine. Highlight of the last day of the trip was hearing Admiral Zumwalt address the San Francisco Propeller Club chapter. His talk concerned merchant marine matters and MSC—and was both interesting and informative. His speech ended at 1400, and our flight departed at 1450. We made it. After going half way around the globe we were home that evening. ⚓

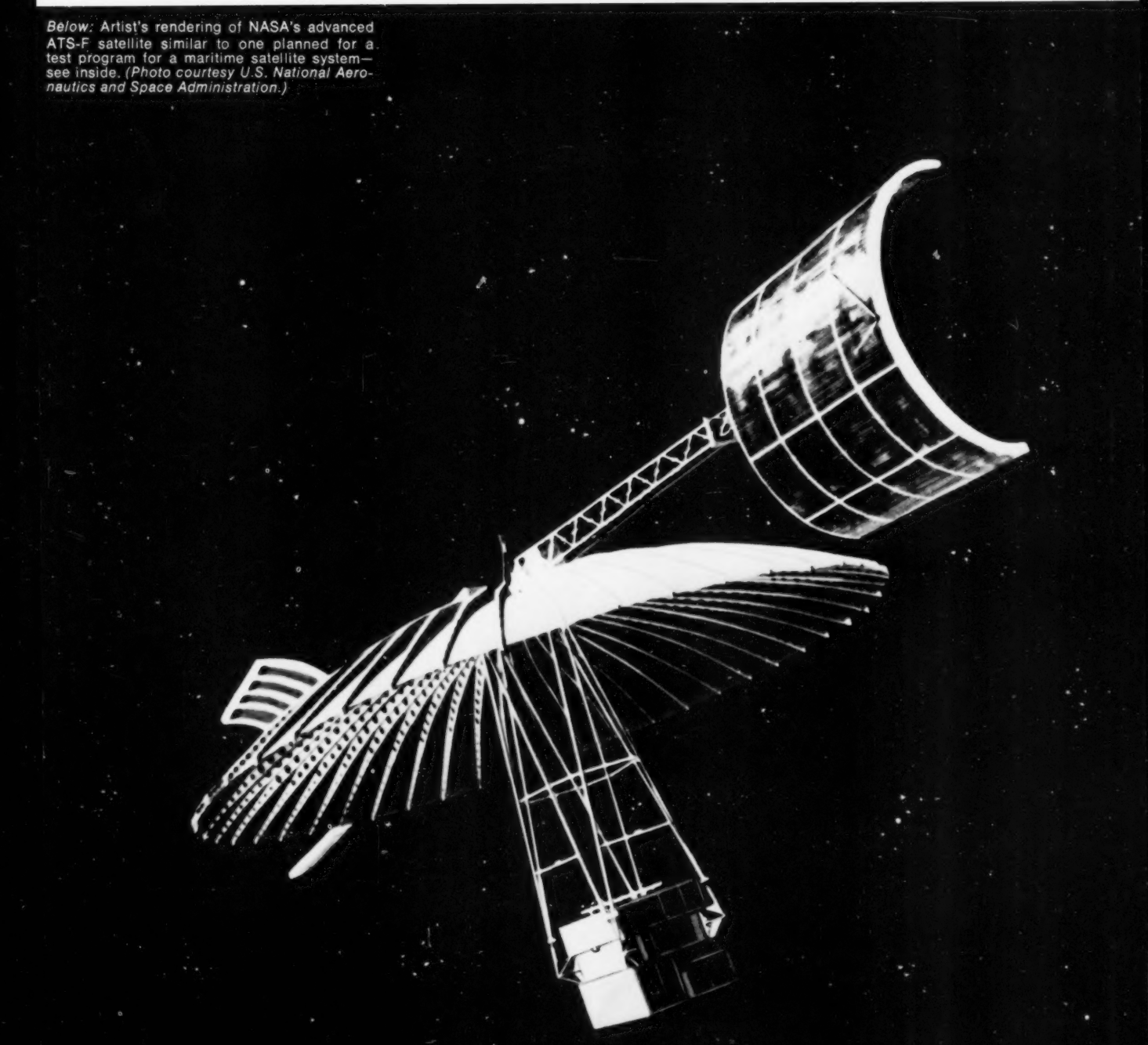
The efforts of all concerned helped make this trip a success, with thanks due all in the Far East area who laid the groundwork for our journey. At the end, I agreed that an inspection trip was indeed hard work, but enjoyable. More important, for a young Navy officer, it was a learning experience that is literally unforgettable. MSC people, everywhere, military and civilian, those who work aboard ship or ashore, all are doing a tremendous job. Without a great deal of recognition, and with far too little credit, they are indeed helping insure our national security.



Use of a satellite by the maritime industry will

Speed communication

by
Larry C. Manning



Below: Artist's rendering of NASA's advanced ATS-F satellite similar to one planned for a test program for a maritime satellite system—see inside. *(Photo courtesy U.S. National Aeronautics and Space Administration.)*

In each of man's journeys to the moon, through hundreds of thousands of miles of space, U.S. astronauts seldom have been out of touch with Earth. Television pictures beamed to Earth have been seen on millions of TV sets—while the astronauts described in living color what they saw and their reactions to it.

And yet, those who sail the Earth's seas in ships still depend upon messages sent and received in Morse code, a system developed in 1838, at a rate far below man's normal speaking speed of 120 words a minute.

Lack of modern maritime communications is especially significant when one considers the fact that ships carry 98 per cent of the world's products, by volume. By value, they move 93 per cent. Compare maritime communications with those existing in the air industry—which enable air controllers to contact aircraft worldwide in minutes—and one wonders if the maritime industry is not missing a bet.

In a report to the American Institute of Merchant Shipping, Edward P. Fitzgerald, an Exxon official indicated just that. "Never," he said, "has there been a time that a technology has so far advanced beyond the implementation of its capabilities by the maritime industry."

"In the past two years, at least five large commercial vessels have gone to the bottom without sending a distress message."

Need for more effective communications between ships, and ship to shore is evident. In the past two years, at least five large commercial vessels have gone to the bottom without successfully sending a distress message. In each case, at least 20 lives were lost.

Ship explosions, fire or breaking up generally results in loss of power which accounts for inability to send a distress signal. Other reasons include equipment failure, or improper operation of equipment because of seamen's lack of familiarity with it.

In November 1966, the SS Daniel J. Morrell sank on Lake Huron at 2 a.m. More than a day and a half later a search was started for the ship. Lack of communications caused the delay since it was not known the ship was missing for 36 hours. Despite the fact that two ships were in the immediate area, 28 men died. Only one survived.

In another instance, a burning Norwegian vessel was sighted off Greenland by a Polish ship which could not communicate with the blazing vessel by either voice or radio. When a U.S. Coast Guard vessel arrived on the scene, three men still on the ship were saved, and four bodies were recovered. Another 25 had abandoned ship. They never were found, despite a two week search.

Many other examples could be listed, all of which dramatically point up the need for better communications. Other factors also are involved.

Crew morale is one. With better communications, crewmen could be more promptly notified of family emergencies. Same goes for emergencies aboard ship which require medical assistance or guidance. Vessel movements and diversions could be better controlled if a rapid communications system were in operation, and needed repairs could be scheduled before a ship arrived in port. Current weather forecasts would help save lives and damage and transmission of up-to-date information would enable fleet owners to make more intelligent and cost-saving decisions which are required every day.

It's probably an exaggeration, but not too great a one, to state that hundreds of lives lost and millions of dollars squandered could have been saved if the maritime industry had made the investment required to develop marine communications systems comparable to those existing in other transportation fields.

But, something is being done. Unfortunately, much of the effort takes the form of studies. And studies, as any student of human endeavor can tell you, share a characteristic with the angleworm. Divided into several parts, they continue to exist and proliferate. Studies too often generate bucketsfull of worms—and few solutions.

The American Institute of Merchant Shipping (AIMS) has recently completed one technological assessment and economic analysis of a satellite communications system for U.S. shipping. Other studies have been conducted by the Department of Commerce's Maritime Administration and by the Coast Guard.

A satellite marine communications system has been proposed which would harness techniques mastered in space flight and research—and which would provide a communication blanket for the Atlantic, Pacific and Indian oceans. Ship distribution is estimated at 35 per cent in the Atlantic and in the Pacific and 25 per cent in the Indian ocean—95 per cent of total ship traffic.

The U.S. Navy is a stride ahead of the merchant marine in efforts to provide 20th century communications for ships, with a Global Rescue Alarm Net already being developed. Compact and simple transmitters will link Navy ships with space satellites which can relay messages literally around the world, instantaneously.

Obviously, Navy ships spend substantial time at sea. In the past merchant ships spent much time in port, loading and unloading. However, with development of new types of cargo vessels and tankers, merchant ships now spend as much as 65 per cent of their time at sea. That aggravates the communications problem. Out of sight and out of reach, ships are more or less going it

alone when effective utilization of intermodal transportation systems demands timely communication among all elements of the system.

Consider today's $20 to $65 million investment in a single ship, and one again must wonder why so little money has been spent to improve communications.

"Consider $20 to $65 million invested in a single ship, and one wonders why so little is spent to improve communications."

According to Gerard P. Yoest, who is coordinating AIMS push for adoption of a navigation-communications system using space communications satellites, "A European consortium could well develop the first marine satellite system." "That would have," he warned "a detrimental impact on competitiveness of the U.S. merchant marine, and on our balance of payments and worldwide economic position."

"European nations possess the ability to launch a maritime communications satellite," he added, "and so do the Japanese." He also reported that the USSR is interested in the Inter-Governmental Maritime Consultative Organization's (IMCO) satellite planning—and would probably support development of a satellite communications system.

At present eight American companies are working with the Maritime Administration in a test program. They include American President Lines, Chevron Shipping Co., Exxon, Farrell Lines, Marine Transport Lines, Moore McCormack Lines, Texaco Inc., and United States Lines. Focus is on obtaining data that would enable a compilation of requirements for an operational system.

In a survey of 12 large shipping companies, AIMS asked if they would use satellite navigation services, if they would use satellite surveillance activities, and if the ship masters would welcome such services. Sixty per cent answered yes to the first question with positive response to the other two queries being 100 per cent.

The AIMS study also reported on increases in shipping—and time ships spend at sea. In 1969, the world fleet consisted of more than 21,000 ships, with 10,000 at sea at any one time. Projections for 1980 indicate there will be 25,000 ships with almost 14,000 at sea at a given time. Growth of the sea population will be about 40 per cent although numbers of ships are projected to be up only 18 per cent. What does that indicate? That communications will become even more important.

At eight words a minute, 1970 telegraphic transmissions required about 125,000 man hours a month. Projection for 1980 is 380,000 hours, up 200 per cent. Number of radiotelephone calls in domestic high seas will jump from 104,000 in 1970 to 418,000 by 1980, an expansion rate of 30 per cent per year. Theme of the day then may be, "That line is busy."

Even now delays are commonplace. Mail deliveries to ships require weeks with radio-telegraph transmission time averaging 12 hours. While mail delivery is reliable, radio-telegraph reliability is labeled "'poor." So is that for radio teletype, radio telephone, facsimile transmisions and data and emergency messages. And cost is high—or at least higher than satellite costs are predicted to be.

Median cost for radio telegraph messages is about 38 cents per word with radio teletype costing 6 cents per word. Radio telephone? Deposit $6 for three minutes, please.

Present systems have other limitations. Transmitter frequencies are severely limited with telephone transmitter power inadequate—which means short range capability. Data and facsimile capability are similarly inadequate. Another disadvantage of existing systems is that no meaningful standards have been set for design of reliable equipment or its operation.

Equipment reliability is 70 per cent, according to an 1967–69 IMCO study with propagation reliability only 80 per cent. All of which reminds one of the Vermont farmer who told a tourist seeking directions, "You can't get there from here."

"At eight words a minute, 1970 telegraphic transmissions required about 125,000 man hours a month."

What type of communications service is needed? According to AIMS, rapid access and high reliability for voice, facsimile, teletype and data communications. That means average delay of no more than 10 minutes and 99 per cent reliability. Only automated methods of contact should be used, AIMS reports, and an effective system must be interconnected with the general telecommunication networks. They recommend leased systems with standard charges, and refunds to the user for time equipment is not operational.

The obvious question is, cost? AIMS studies indicate that satellite communications would cost 3 cents a word—considerably less than the present 38 cents. That figure is based upon an assumption that 1,500 ships in the Atlantic, Pacific and Indian oceans would use the satellite system. A relatively small sum of $6,000 a year would handle the

leasing of all shipboard and space hookup systems. And that estimate includes the maintenance of shipboard systems.

Present costs, according to an operator of 150 ships, are $6000 per year for a ship, plus $4000 for maintenance. Apparent savings of $4000 a year would be boosted even more since no amortization would be required for leased shipboard equipment.

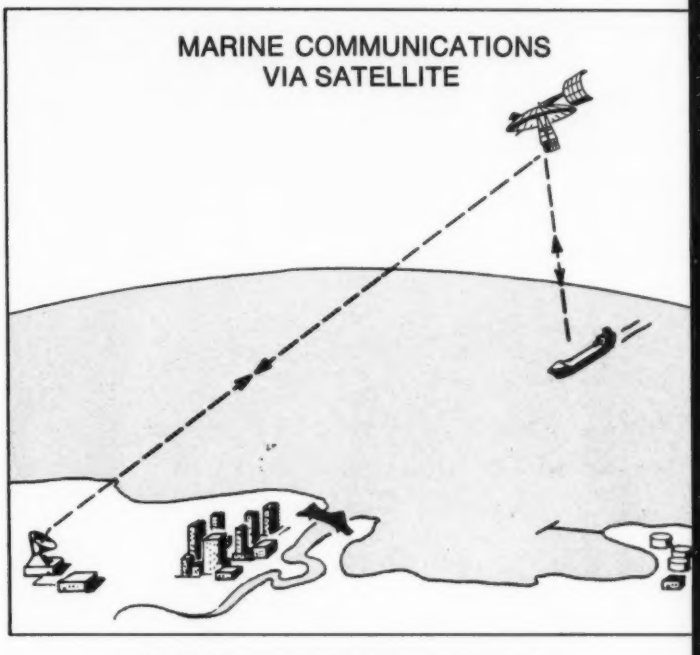
Will ship communications ever be linked to satellites? Two March events pretty much tell the story. At a meeting in London of the IMCO subcommitee on radio communications, AIMS Telecommunications Committee Chairman David Newman, of Exxon Co., discussed navigation capability of a maritime satellite. Some foreign nations thought it would cost too much, but were favorably impressed by the AIMS estimate of costs. More interests in maritime satellite communications apparently was generated.

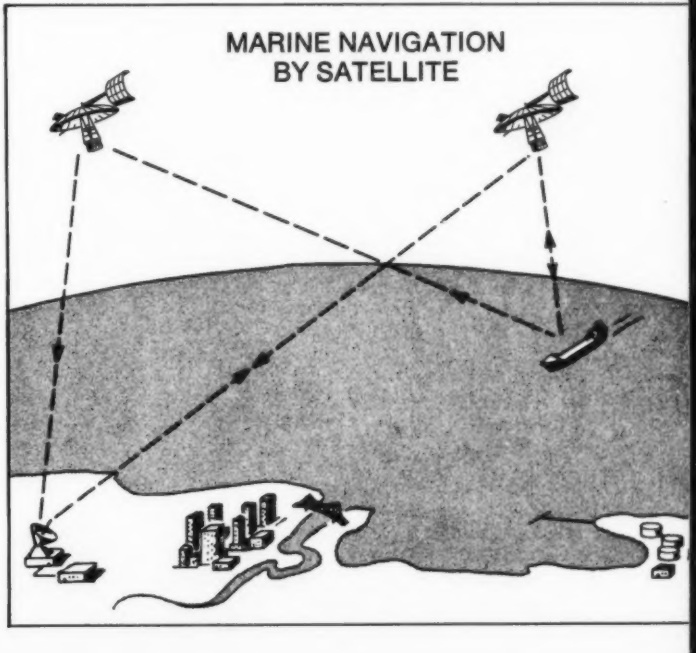
"Will ship communications ever be linked to satellites?"

Early in March, Navy announced signing of a $28 million contract with Communications Satellite Corporation, COMSAT, which will lease a portion of two communications satellites to the Navy for a two year period. Service is to begin September 1 and will allow the Navy to use two satellites in 23,000 mile orbits, one over the Atlantic and one over the Pacific. They will be used until the Navy develops its own satellite communications system.

During their five year lifetime, the satellites could be used to provide the communications system the maritime industry so badly needs. COMSAT estimates launch and maintenance of the two satellites will cost $70 million.

AIMS now is polling the maritime industry to determine an industry position. It would seem that a door has been opened. It's now up to the maritime industry whether or not they will follow in the footsteps of those who already have moved mankind one giant stride forward in the field of long-distance communications.





Diagrams illustrate the two functions of a proposed system: Communications, calling for one satellite in each of three areas of the world, and navigation, with a second satellite to be used in conjunction with the first one in each area.

After three years at sea as a scientist on MSC's oceanographic survey vessels, Sharon Pool is

A young salt

photos and story
by
Russ Egnor

WORK: Sharon spends a major portion of her time analyzing and feeding data into a computer.

"At sea I wear dungarees, a baggy sweatshirt, and try to blend in with the guys." However, Sharon Pool, a 28 year-old mathematician who spent seven months of last year at sea aboard MSC special project ships can't really pass as a man—and wouldn't want to. She is happy that she is accepted as a working member of a seagoing navy team.

Sharon, who received a Bachelor of Science degree in math from Bucknell University in 1967, has been going to sea for the past three years as a scientist for the Naval Oceanographic Office. She's worked aboard the Silas Bent, Wilkes, Kane and Keathley, all Military Sealift Command operated research ships.

Probably the envy of many a deskbound young lady, Sharon's travels have included port stops in Norway, the Canary Islands, Hawaii, Jamaica, Curacao, Puerto Rico, San Francisco, Florida and Texas.

One who definitely does not consider herself a woman's libber, she is one of a growing group of women scientists going to sea for Naval Oceanographic Office. She describes her job at sea as many long hours behind a computer, analyzing data collected.

"I've never been seasick, although there have been times when the water was anything but calm," she said.

Asked if it was awkward at sea for long periods of time with 50 or more men, who might occasionally use

rather salty terms, she replied, "No, not really. There have been many times when someone would come up to me and apologize for forgetting and saying something, when actually I never heard it."

But she has a problem—one she shares with fellow crew members. Food aboard MSC ships is excellent—and plentiful. But, she tries to stay away from it as much as possible. "I watch my weight and try to just have one meal a day."

When asked if she had experienced any unusual problems as a seagoing woman, Sharon recalled a couple of occasions when she had trouble with shore security personnel, trying to convince them she actually was assigned to the ship.

In her spare time at sea, Sharon Pool sun bathes, reads or writes letters. Her next ship is scheduled to be the USNS Wilkes, bound for Plymouth, England and Rotterdam on a surveying operation.

She enjoys her life in an otherwise all-male world. Why? Because she is doing a job she likes to do, and reaping the rewards her professional expertise has earned. But, despite the baggy sweatshirts and dungarees, and the fact that she does the same job as her male counterparts, her fellow crewmembers know she is unique. One member of an MSC ship's crew summed it up in one word when asked about his reaction to mathematician Sharon Pool. His response: Wow!

That figures.

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ABOARD SHIP: Sharon has almost all the comforts of home.

Return of the last of the troopships, Barrett and Upshur, from the Far East marks the

End of an era

The chapter is finished ,the book closed, the era of the troopship is over. With the return of the USNS Barrett and USNS Upshur from the Far East to the United States in March, Military Sealift Command ended almost 23 years of troopship operation.

The sealift command took over all troopships from the Army and Navy when it was formed in 1949. By July 1952, the peak year for transport operations, the command had 69 troopers sailing on regularly scheduled runs throughout the world.

Reductions in overseas troop deployment and advent of jet aircraft curtailed the need for the troopers and many were laid up to return to the Maritime Adminisration for sale or scrapping. But, some still continued to make the headlines.

In 1958, during the Lebanon crisis, U.S. Army needed three transports in Northern Europe to move more than 5,000 troops to Beirut. Troopships Randall, Geiger and Upshur answered that call. During Lebanese operations, MSC ships fed, housed, and transported 8,286 men.

In 1961, as a result of the Berlin Crisis, Defense deployed troops from the U.S. East Coast to Cherbourg, Le Havre, and Bremerhaven. Seven transports made 20 round-trip sailings during a three month period, lifting 29,182 military men.

In 1961, MSC also was called on to move United Nations troops to and from the Congo—an operation which lasted for a two and one-half year period. Four troopships and an MSC cargo ship transported 17,391 troops to the Congo, and returned 22,692 others. The small MSC fleet steamed more than 230,000 nautical miles to accomplish its mission—a distance equal to 10½ times around the world.

In the early phase of the Vietnam buildup, the remaining troopships assigned to MSC's Pacific area command again delivered fighting men and their equipment to a war zone. However, in later stages of the conflict, after MSC had delivered the building materials and landing strips had been built, U.S. troops were flown in and out. Three of the big gray ships remained in operation, rotating Korean troops between their own country and Vietnam.

Now they too are gone. The USNS Geiger was removed from Korean troop rotation in April 1971. The Barrett is now on the West Coast, being readied for layup in the National Defense Reserve Fleet.

Upshur, the ship that evacuated 1,725 dependents from Guantanamo Bay during the Cuban crisis, is starting a new life.

The 21-year old transport is being given to the Maine Maritime Academy for use as a new training vessel. She will replace their present ship, the State of Maine, and assume that name when she becomes the school's property.

The ship has made the 12 day transit from Oakland where Capt. M. C. Hill, the current State of Maine master; Capt. William Brennan, commandant of midshipmen; Cmdr. William Creighton, chief engineering officer, and Chief Steward Robert Carter boarded her for the trip east. The ship will be berthed in Boston until she is officially turned over to the academy in mid-April.

The new State of Maine is 534 feet in length and weighs approximately 13,300 tons. The old training vessel is 494 feet and weights 9,900 tons. The Upshur can accommodate 382 officers and 1,400 troops, but Maine Maritime Academy plans to use some of the space for labs and classrooms.

The midshipmen from Maine will take the vessel on a two month training cruise to South America this summer, including visits to Columbia, Brazil and Curacao in the Netherlands Antilles. One of the highlights of the cruise will be the delivery of material from 10 U.S. states to states in South America through the "Partners of the Americas" program.

Partners of the Americas is a privately funded aid program in which U.S. individuals and companies provide Latin Americans with materials and skills they need, in exchange for materials and skills their U.S. counterparts can use.

"Partners of the Americas probably has worked all these years because private citizens are giving their neighbors exactly what they want most, with a minimum of bureaucracy and Government funds," said E. David Luria, the associate director. "With 10 Eastern seaboard partner states sending cargo on board the Upshur, we have dubbed this project 'Operation Partners Ship.' We are indebted to the Maine Maritime Academy for making this shipment possible. Turnover of the ship from MSC couldn't have come at a more opportune time."

Upshur will also transport the Maine agricultural cruise trade show. Agricultural exhibits and Maine produce and products are featured. Receptions will be held at each port of call during the two month voyage.

When Barrett and Upshur left the Far East, Rear Admiral John D. Chase, MSC commander, sent both ships a message which pretty well sums up the record of the last two U.S. troopships. "You may sail proudly home in the knowledge your long and difficult mission has been accomplished with outstanding professionalism, cooperation and spirit. Please pass to all hands my personal well done, and welcome home."

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Postscript

A REMEMBRANCE: Lloyd Haugh, first officer of the Upshur, presents a painting of the ship to Rear Adm. John D. Chase, commander of Military Sealift Command.

The USNS Upshur is now known as the State of Maine, training ship of the Maine Maritime Academy. The last of the troop transports is gone, all that remains are chronicles of their exploits, some tattered yellowing photos and memories.

In anticipation of this milestone in maritime history, Capt. Robert E. Landry, the last master of Upshur, and her chief engineer, William E. Strain commissioned an artist in Pusan, Korea to paint the Upshur before her return to the states. The painting was presented to Rear Admiral Chase, commander of Military Sealift Command early in April by Lloyd Haugh, first officer of Upshur.

A note from Captain Landry accompanying the painting read, "I wish to present to you this painting of Upshur as a remembrance of the last operational troop-passenger transport under your command. She is a 'Grand Old Gal' and we feel certain the Maine Maritime Academy midshipmen will continue to treat her with tender loving care."

The painting now hangs in the headquarters of MSC, a memorial to all troopships who so ably served the nation.

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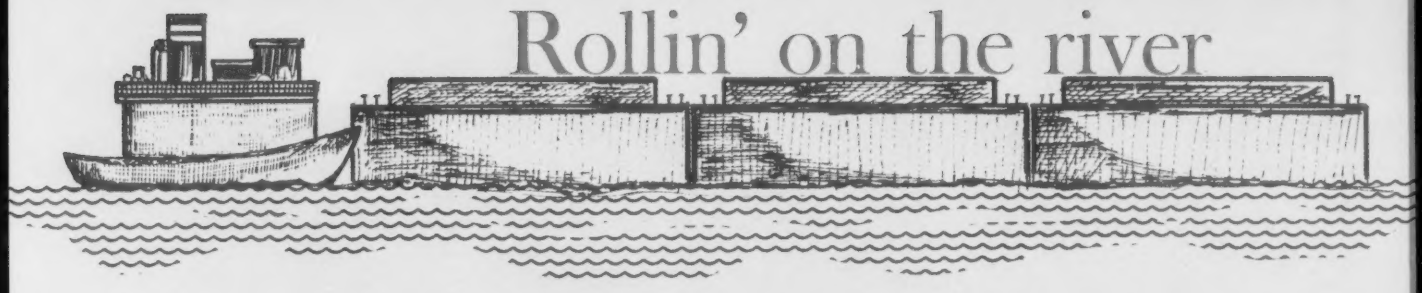
To move an Army helo company, MSC used a Seabee whose barges were sent

Rollin' on the river



Added evidence of the flexibility of new ships being put into operation by U.S. companies resulted from the recent delivery of an entire Army helicopter company's equipment from the U.S. Gulf Coast to an Army depot on the Rhine River in Germany.

For Military Sealift Command, which was asked to help move the 175th Army Aviation Co. from Pensacola, Fla., to Illesheim, Germany, the requirement was a natural for the Seabee type ships operated by Lykes Brothers between Gulf of Mexico ports and Europe. They carry both commercial and military cargo on regular runs.

The Seabee has a unique advantage over conventional break bulk ships—and container ships—in that it is in reality an ocean going link in a system extending from inland port to inland port. While, like other ocean going ships, it cannot sail up rivers such as the Mississippi and the Rhine, its barges can be towed or pushed up shallow inland waters. The barges, in effect, extend the operating environment of the Seabee delivery system, while at the same time offering the advantages of conventional container ships—notably speed, rapid turnaround capability and the protection of cargo carried from damage and pilferage.

Cargo booked by MSC on the Doctor Lykes included 21 AHIG and two UH1H helicopters—and support equipment of the Army helo company. Ten barges, four carrying unit equipment and six loaded with the helos, were used. They were towed from Pensacola to Mobile, Alabama, and lifted on the Doctor Lykes. The ship sailed for Rotterdam on January 18. At Rotterdam the barges were discharged at an Army depot at Mannheim, Germany.

At Mannheim, the barges were unloaded by gantry crane and positioned for pick up by an Army Skycrane helicopter. The Skycrane lifted them to Coleman Barracks, a few miles away.

Put into flying condition in an average of 20 hours each, they then were flown to Illesheim where the 175th Aviation Company is now stationed.

Was the Army as MSC's customer satisfied with the Dr. Lykes Seabee performance? According to Major General John Appel, logistics officer of Army's European Command—the answer is a resounding "yes". After observing the barge discharge in Mannheim, the general wired Rear Admiral John D. Chase, MSC commander, "I feel that the Seabee concept offers significant potential for both peacetime and contingency uses here in Europe, and heartily encourage expanded usage."

Col. William Stendeback, of Military Traffic Management and Terminal Service's Eastern Area, who helped arrange the loading, also was highly impressed. Seabee ships, the colonel noted, are a "helluva delivery system." Asked if container ships and barge carriers were competing for the same type cargo, the colonel felt they were not. He noted that barge carriers are ideal ships in an environment where inland waterways are located at each end of their ocean routes. If they are taking cargo away from more traditional carriers, he said, it is from break-bulk ships since they do cut down on cargo loading and handling time—while being able to deliver from point of cargo origin to the actual destination.

The Lykes Seabees are 875 foot long ships, each capable of carrying 38 barges. A single barge can handle 1,000 measurement tons. Seabees differ from the LASH—Lighter Aboard Ship—barge carriers in that they have a hydraulic elevator at the stern which lifts two loaded barges from the water. LASH vessels use a crane to do the same job with both ships loading and unloading barges over the stern.

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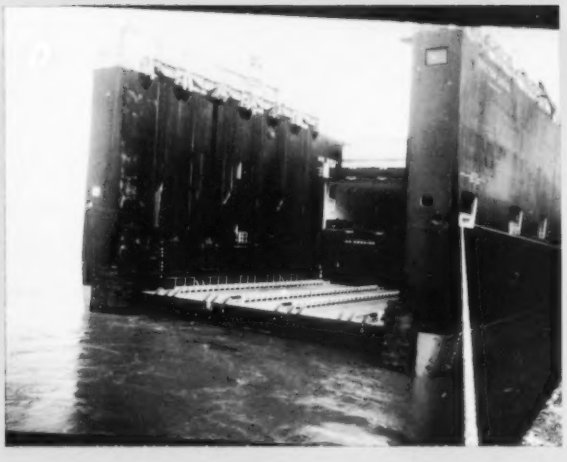
1. Dr. Lykes arriving in Bremerhaven.



2. Barge moving to stern for off-load.

3. Tug tows a barge from the Doctor.

4. Tug pushing barges up river.

For her name and other pertinent data, see page 16

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